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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/810,211	03/26/2004	Udo Bickers	09879-00043-US	8656
23416 7590 11/09/2007 CONNOLLY BOVE LODGE & HUTZ, LLP P O BOX 2207 WILMINGTON, DE 19899			EXAMINER BROWN, COURTNEY A	
			ART UNIT 4133	PAPER NUMBER
			MAIL DATE 11/09/2007	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

Application No.

10/810,211

Applicant(s)

BICKERS ET AL.

Examiner

Courtney A. Brown

Art Unit

4133

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 26 March 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) 13-20 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
  - 2) ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date See Continuation Sheet.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

Continuation of Attachment(s) 3). Information Disclosure Statement(s) (PTO/SB/08), Paper No(s)/Mail Date :3/26/2004, 11/26/2004 and 12/20/2004.

## **DETAILED ACTION**

### ***Election/Restrictions***

Applicant's election with traverse of Group I (claims 1-12 )in the reply filed on August 17, 2007 is acknowledged. The traversal is on the ground(s) that (1) the Office has allegedly not established proof of a burdensome search, in that both Group I and Group II are within Class 504 and in subclasses 100, 304, and 323 that there is no alleged difference and that there would be no additional search burden imposed on the Examiner. This is not found persuasive because as indicated in the restriction requirement mailed July 17, 2007, the process of Group I can be practiced by a materially different product, such as applying toxic compounds to plants to induce and enhance the plants own defense mechanism. Further, different products such as magnesium chloride, sucrose, or cloquintocet are known safeners in the art that could be used. A search of the process of Group I would not necessarily be coextensive with a search of the product of Group II, because the product of Group II can produce a wide variety of compounds that will have a varying number of properties, are fundamentally divergent and are not obvious variants of one another. Thus, as was originally set forth in the restriction mailed on July 17, 2007, the inventions of Group I and II are both independent and distinct and a search of Groups I and II would represent an undue burden, because the search of one group is reasonably expected not to be coextensive with a search of the other group.

Applicant's election of a compound of formula (I) wherein R1 represents a carboxyl group, R2, R3, R4, R5, and R6 each represent hydrogen, m is 0, n and o are each 1, and Z and Z" are each oxygen( e.g. 3,5-dihydroxybenzoic acid) is noted. The examiner's position has been reconsidered and notes that the "specific compound" requirement should have been a species election requirement. Therefore, if applicant's election is found allowable, the search will be extended to other compounds.

The requirement is still deemed proper and is repeated and hereby expressly made FINAL.

Claims 13-20 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected invention, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the reply filed on August 17, 2007.

Because these inventions are independent or distinct for the reasons given above and there would be a serious burden on the examiner if restriction is not required because the inventions have acquired a separate status in the art in view of their different classification, restriction for examination purposes as indicated is proper.

Because these inventions are independent or distinct for the reasons given above and there would be a serious burden on the examiner if restriction is not required because the inventions require a different field of search (see MPEP § 808.02), restriction for examination purposes as indicated is proper.

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Claims 1-20 are pending in the application. Claims 13-20 are withdrawn from further consideration per the restriction requirement. Claims 1-12 will be examined on the merits.

***Priority***

Priority to German Foreign Application 10313480.8 filed on March 26, 2003 is acknowledged.

***Information Disclosure Statement***

Receipt of Information Disclosure Statements filed on March 26, 2004, November 26, 2004, and December 20, 2004 is acknowledged.

***Claim Rejections- 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office Action:

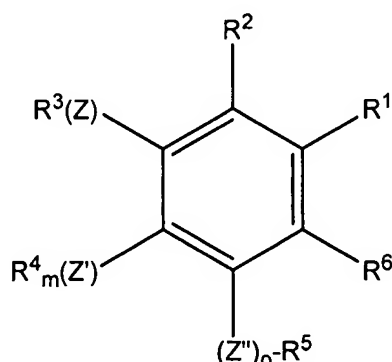
A person shall be entitled to a patent unless-

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-8 and 10-12 are rejected under 35 U.S.C. 102(b) as being anticipated by Senaratna et al. ( WO 99/25191).

Applicant claims a method for protecting useful plants or crop plants against harmful environmental factors and phytotoxic side effects of pesticides from a group consisting of herbicides, insecticides, acaricides, nematocides, and fungicides. This method comprises applying( by a pre-emergence method which is before the plant emerges form the soil and a post-emergence method which is after the plant emerges from the soil) as safeners or resistance inductors, an effective amount of one or more compounds of the formula I or salts thereof, before, after, or simultaneously with the agrochemicals to the plants, parts of plants, plant seed, or propagation material.

**Formula I**



Senaratna et al. disclose a method for inducing stress tolerance (safener) in plant material comprising applying to the plant material an effective stress-regulating amount of one or more active compounds of formula (I) of the instant application wherein  $R^1$  represents a carboxyl,  $R^2$ ,  $R^3$ ,  $R^4$ ,  $R^5$ , and  $R^6$  each represent hydrogen,  $m$  is 0,  $n$  and  $o$  are each 1, and  $Z$  and  $Z''$  are each oxygen (e.g. 3,5-dihydroxybenzoic acid) ( see abstract).

Senaranta et al. disclose using the active compound of formula (I) to induce tolerance to temperature, drought, freezing, heat (i.e. harmful environmental factors), and herbicide tolerance (page 6, lines 1-6).

Senaranta et al. disclose (page 6, lines 12-18) that the induction of stress tolerance may be achieved by application of the active compound to plants in various stages of development such as applying to the soil habitat of the plant or directly to the plant in the seedling stage (post-emergence). Senaranta et al. disclose that seed may be imbibed in one or more of the active compounds prior to planting (pre-emergence) (page 6, lines 12-18). Senaratna et al. also disclose that the said active compound may be applied to the plant material in conjugation with compounds such as insecticides, acaricides, nematocides, fungicides, and herbicides (page 11, lines 16-20).

Additionally, Senaranta et al. disclose that the plant material to which the said compound is applied to be various forms of plant material including whole plants such as seedlings and portions thereof such as cuttings, plant tissues, fruit, flowers and seeds ( page 4. lines 25-29).

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention



was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

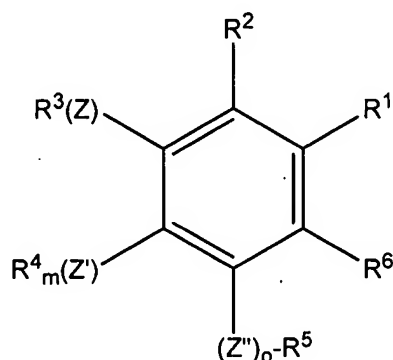
This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Senaratna et al. (WO 99/25191) in view of Walters et al. (ANNALS OF APPLIED BIOLOGY, volume 122, 1003, pages 451-456).

### ***Applicant's Invention***

Applicant claims a method for protecting useful plants or crop plants against harmful environmental factors and phytotoxic side effects of pesticides from a group consisting of herbicides, insecticides, acaricides, nematocides, and fungicides. This method comprises applying( by a pre-emergence which is before the plant emerges from the soil and post-emergence which is after the plant emerges from the soil) as safeners or resistance inductors, an effective amount of one or more compounds of the formula I or salts thereof, before, after, or simultaneously with the agrochemicals to the plants, parts of plants, plant seed, or propagation material. Applicant also claims a method for protecting useful plants or crop plants wherein the compounds of formula I are used in the plants to induce resistance against infection by pathogens.

### **Formula I**



***Determination of the scope and the content of the prior art  
(MPEP 2141.01)***

The teachings of Senaranta et al. are incorporated herein by reference and are therefore applied in the instant rejection as discussed above.

***Ascertainment of the difference between the prior art and the claims  
(MPEP 2141.02)***

Senaranta et al. do not disclose a method for protecting useful plants wherein the compounds of formula (I) are used to induce resistance against infection by pathogens as disclosed in claim 9 of the instant application.

Walters et al. teach a use of particular meta- and/or para- hydroxyl-substituted benzoic acids (vanillic acid, isovanillic acid, or syringic acid) to induce resistance (safener) in barley to mildew infections (infection by a pathogen). The hydroxybenzoic acids vanillic acid (formula (I) of the instant application wherein R1 represents a carboxyl, R2, R3, R4, and R6 each represent hydrogen, R5 is A3= a substituted hydrocarbon radical, m and n are each 1 and n is 0, and Z' and Z" are each oxygen), isovanillic acid and syringic acid are among the compounds mentioned as examples in

the present application and exhibit resistance induction (safener) that is almost equal to that of salicylic acid (see page 451, second paragraph; page 452 second paragraph; page 454, Table 5; page 455, second paragraph; and page 456, second paragraph).

***Finding of prima facie obviousness***

***Rationale and Motivation (MPEP 2142-2143)***

It would have been obvious to a person having ordinary skill in the art at the time of the invention was made to combine the teachings of Senaranta et al. and Walters et al. to formulate a method for protecting useful plants wherein the compounds of formula (I) are used to induce resistance against infection by pathogens. One would be motivated to combine these teachings because salicylic acid, which is in the phenolic acid family along with the compounds of formula (I) in the instant application, is suggested to induce the appearance of systemic induced resistance (SIR) in crop plants such as cucumber and tobacco (Waters et al. page 452, paragraph 2). It is known in the art that SIR is effective against a wide range of pathogens (Walters et al. page 451, paragraph 3).

It would be prima facie obvious to combine two methods each of which is taught by the prior art to be useful for the same purpose in order to form a third method that is to be used for the very same purpose; the idea of combining them flows logically from their having been individually taught in prior art." In re Kerkhoven 206 USPQ 1069, 1073. Thus, combining Senaranta et al. with a with Walters et al., as claimed in the instant invention, sets forth prima facie obvious subject matter.

No claims are allowed.

### ***Conclusion***

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR Only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electron Electronic Business Center (EBC) at 866-217-9197 (toll-free). Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Courtney Brown, whose telephone number is 571-270-3284. The examiner can normally be reached on Monday-Friday from 8 am to 4:30 pm.

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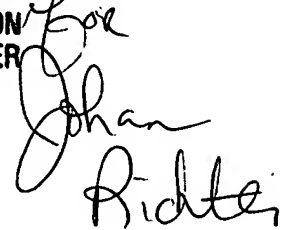
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If attempts to reach the examiner by telephone are unsuccessful, the examiner's Supervisor, Johann Richter can be reached on 571-272-0646. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Courtney A. Brown



SHELLEY A. DODSON  
PRIMARY EXAMINER



Johann  
Richter